



Thanks to all the volunteers that
are making this project a success!

Status Report- Spring 2003

MANCHESTER'S ENVIRONMENTAL CHALLENGE

Background

As part of an innovative agreement reached in March 1999 to reduce sewer overflows into the Merrimack and Piscataquog rivers, the city is undertaking \$52.4 million in projects to eliminate the majority of sewer overflows. The city is also undertaking \$5.6 million in supplemental environmental projects to benefit the city's environment. This includes \$2 million for land preservation; \$1 million to restore urban ponds; \$1 million to stabilize streambanks, \$1 million to reduce stormwater pollution; \$500,000 to reduce health threats to children; and \$100,000 for environmental education. This status report updates the activities of these supplemental environmental projects.

Join Us For:

Manchester's Earth Day Forum

Come learn more about the City's environment on Thursday April 24, 2003 at "Manchester's Earth Day Forum." This forum will provide an opportunity to network and hear about various environmental and health related activities in the City. It will be held at PSNH Energy Park-Five Rivers Auditorium from 5:00-9:00 pm. For more information call Joanne McLaughlin, Recycling Coordinator at the Manchester Highway Department (603) 624-6444 ext. 303.



Streambank Stabilization and Erosion Control

The Merrimack River has been re-inventoried to better define problem areas along the stream bank. Streambanks along the Piscataquog river, and all other tributary streams in the City have been inventoried, thanks to the help of Dave Kellam, formerly with NH Audubon at Massabesic Lake. Dave has moved on and now works with the NH Estuary Program in Portsmouth.

Dave had also worked to coordinate preliminary design work at four areas on the Piscataquog River where public access is causing erosion. A prioritized list of all problem sites on the rivers in Manchester is being developed, from which projects will be selected for implementation this spring.

NH DES is working with Wakefield Materials to restore a portion of Black Brook which drains into Maxwell Pond. An advisory committee is being formed to study the feasibility of removing the Maxwell Pond dam on Front Street. This would result in the restoration of the Brook which was dammed to form Maxwell Pond in 1900. If you are interested in finding out more contact Art Grindle, (603) 624-6450. Another restoration project taking place is on the Merrimack River. The Intervale Country Club is restoring a section of the Merrimack River streambank with the help of \$50,000 of money from the SEPP project for streambank plantings.

Health Risk Reduction for Children

The Manchester Health Department suffered a tremendous loss in July of 2002, when its home for many years on 795 Elm Street was destroyed by fire. A great deal of records, files, work, and personal belongings were destroyed in the fire, but thankfully there was no loss of life. The outstanding task of rebuilding a local public health department was made possible by the teamwork of numerous city departments. The Department is now fully functional in their new facility located at 1528 Elm Street.



Urban Pond Restoration

Have you noticed any new signs around the City? Look for them on major streets all over the City. Art Grindle, Manchester's Urban Pond Restoration Coordinator, recently unveiled the first of several signs going up around the City to identify the pond watersheds. Want to know more about what he is doing? Check out the Manchester Urban Ponds new website at:

www.ci.manchester.nh.us/UrbanPonds

"Meet your Pond Days" were held at four pond locations last summer and cleanups were held this past fall at Maxwell, McQuesten, Stevens and Nutts Ponds. In 2001, 40 volunteers helped clean up Manchester's Urban Ponds, and in 2002, 45 volunteers helped. Guess how many bags of litter were removed each year? 51 bags in 2001 and 44 in 2002, that's impressive. Good Work! Thanks to all our volunteers. Analysis of the sediment samples taken from the City's Ponds in 2001 are completed and the news is good for most ponds, except one, Nutts Pond sediment samples showed levels higher than the EPA's standards

of two PAH (polycyclic aromatic hydrocarbons) compounds - Fluoranthene and Phenanthrene. Dredging may be necessary to remove the sediment.

Fish sampling was completed by the NH Fish and Game Department at Nutts Pond, Dorrs Pond, Pine Island Pond, and Crystal Lake. The fish are out there. Several large mouth bass weighing more than five

pounds were found in Crystal Lake and Pine Island Pond. Also found were black crappies, and brown bullheads (Horned Pout). The bass

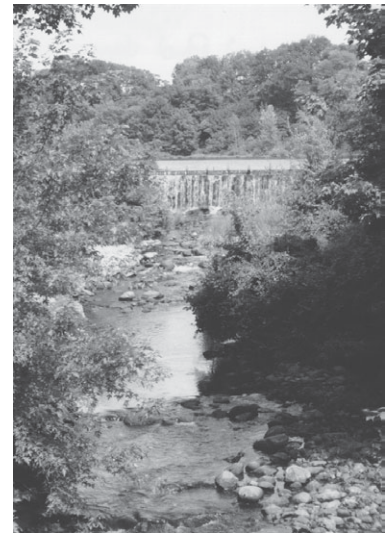


Photo: C. Carlson, Pine Island Pond

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Rosemary Caron, Manchester's toxicologist who is funded through the SEPP, continues to work tirelessly on issues related to children's health, even through trying times.

Health Risk Reduction Grant Program

As part of the SEPP agreement, \$50,000 is made available in the form of grants each year for children's health issues. In October 2002, a grant of \$42,000 was made to fund The Way Home's "Healthy Home and Child Health Project," a project that uses peer educators to assist families to reduce exposures to in-home environmental asthma triggers and lead paint hazards. A second grant of \$8,000 was made to fund a joint project between Dartmouth College's Center for Environmental Health Sciences and the Manchester Health Department entitled, "Manchester-Dartmouth Community Partnership to Reduce Lead Poisoning in Children." This project will develop an outreach program through community focus groups, on reducing lead paint exposure and poisoning.

Asthma Surveillance and Education

The Health Department administered an asthma prevalence survey in the public elementary schools in 2001. The survey will resume during the 2003-2004 school year at the elementary, middle high, and high schools to determine the baseline of asthma among school children, in all grades, residing in

an urban environment. Also, as the result of an air pollution violation by a local industry, the Health Department is authorized to use funds to assist with the asthma prevalence study, provide education regarding indoor air quality, and conduct both outdoor and indoor air monitoring at various school locations.

Air Monitoring Station in Manchester

A new air quality monitoring station has been installed in the City of Manchester in the Pearl Street parking lot. This state of the art unit will monitor criteria pollutants (e.g., NO_x, ozone, SO₂, particulate matter), air toxics, temperature, wind speed, and direction.

Obesity and the Environmental Link

The Health Department is working to address a public health epidemic- obesity. Over the past twenty years, rates of childhood and adolescent obesity have almost tripled. Between 15% and 20% of children in the U.S. are considered obese. The 2001 Manchester Health Department Survey found that 37.7% of first graders are overweight and 19.8% are obese. An obese adolescent has at least a 70% chance of being an obese adult, putting them at a higher risk for heart disease, type II diabetes, high blood pressure, and some forms of cancer.

Last year, Dr. Rosemary Caron, Manchester's Toxicologist and the Manchester Health Department conducted a program that targeted preventing heart disease by focusing on Manchester's youth at risk. The "Healthy Hearts for Manchester Families" program focused on families of students at Beech Street Elementary School with a Body Mass Index greater than 85%. The program focused on promoting nutrition education, physical activity, school food service modification, family intervention, and community involvement.

This year, in coordination with local community organizations and hospitals, the Milbank Memorial Fund chose the Manchester Health Department as one of three communities it would follow as it addressed physical inactivity and obesity in it's community. The "Get Moving Manchester" project is an effort to increase community awareness and to identify programs and initiatives to increase physical activity and reduce obesity.

Join the effort to raise awareness and fight obesity.
Be part of the 5k walk on the afternoon of May 17th.
Get Moving Manchester!

For more information call:
Rosemary Caron,
Manchester Health Department
(603)-624-6466 xt. 317

The City is in the process of hiring a storm water coordinator to assist with review of current City procedures and compliance with federal stormwater regulations.

Eight grade students will be going out this Spring to take part in various watershed events, such as, water quality sampling, trail development, and planting trees.

Environmental Education

A final 8th grade environmental education curriculum has been completed thanks to a partnership between the Merrimack River Watershed Council (MRWC), Amoskeag Fishways (Fishways) and Manchester teachers. The hands-on interdisciplinary curriculum is called Merrimack River Matters (Manchester's Actions That Totally Enhance River Systems). New teaching teams are using the curriculum this school year. A total of 12 teaching teams, three from each middle school (Parkside, Southside, Hillside and McLaughlin) are involved in implementing the curriculum. Over the past three years more than 58 teachers received training in environmental education. As many as 1,200 students will be exposed to the curriculum this year, and as a result are learning more about Manchester's environment. MRWC and Fishways hold teacher training workshops, meet with teaching teams year round, facilitate watershed events, and conduct classroom visits.

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Stormwater Management

All the stormwater outfalls along the Merrimack and Piscataquog River have been inspected and entered into the City's mapping system. Dry weather screening and water quality sampling has been done on the urban pond inlets, and a list of potential illicit connections to the stormwater system has been made and eight suspicious discharges are under investigation, so far. Also, wet weather assessments of selected urban ponds and Merrimack and Piscataquog River outfalls have been completed to analyze "first flush" conditions.



Urban Pond Restoration

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have been tested for heavy metals, pesticides and PCB's. The fish seem to be pretty clean, except at Pine Island Pond, where the fish have high mercury levels.

It looks like Pine Island Pond water clarity has been going down due to recent development pressure. Art Grindle is trying to organize a Pine Island Pond Conservation Group, call him if you are interested at (603) 624-6450.

So what happens to the ponds when it rains? Wet weather sampling was completed in 2002. Automatic samplers were used to collect water samples during three storm events at 13 different locations. Results of the sampling revealed that very polluted runoff is impacting the ponds each time it rains. The data backed up the assumption that urban runoff is the most serious issue currently facing the ponds.

Three years of data have been collected to assess the ponds. It is now time to do restoration projects. Art worked with Manchester's Conservation Commission to develop a list of priority pond projects and several of these are now being implemented. These include projects to treat urban runoff at Dorrs Pond and Crystal Lake. Best management practices will be installed in and around inlets to these ponds. These projects are being assisted by grant funding from the NH Department of Environmental Services.

There has also been work done by NH DES and others to study the feasibility of removing the dam at Maxwell Pond, and restoring Black Brook as a fishery. An advisory committee is being formed to take a closer look at the possibilities for this site and help decide on the future of the Maxwell Pond-Black Brook Corridor.

Environmental Education *from page 3*

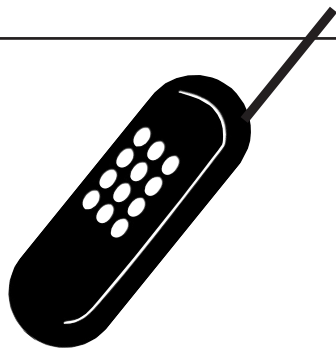
Students will be going out this Spring to take part in various watershed events, such as, water quality sampling, trail development, and planting trees. There is nothing like getting your hands dirty and wet to get to know the environment.

Land Preservation

It's time to go for a walk in the Hackett Hill Preserve, now owned by The Nature Conservancy (TNC). Two additional properties near the preserve have also been acquired by the City bringing the preserve to a total of 454.6 acres. The City was awarded a \$75,000 grant toward the purchase of the property from the Land and Community Heritage Investment Program. The entire 1.6 mile trail has been completed with a trail head on Countryside Boulevard. This includes a section of trail through a portion of the rare wetland habitat. To complete the bog bridges this year, TNC hosted six volunteer work days. Volunteers hauled lumber to the work site through spring, summer and fall. They pre-cut pieces on site to prepare them for construction and then constructed the bridges on the final work day. Students from Manchester Stark House Youth Development Center, and eighth grader students from Hillside and McLaughlin Middle Schools helped with the work. Thanks to all who participated! Volunteers also continue to monitor the ground water levels in the preserve's cedar swamp basins to gather baseline information and watch for any changes.

Parking has been designated along Countryside Boulevard and a trail register and signs have been installed. The 117,000 feet of boundaries for the preserve are in the process of being flagged and marked with TNC boundary signs. Five Volunteer Preserve Monitors have been enlisted to help with this work and to monitor the preserve regularly. The NH Fish and Game Conservation Officer has also been enlisted to patrol against illegal ATV use on the property.

TNC has raised its \$100,000 portion of the Stewardship Endowment and has received the matching payment from the SEPP, thereby reaching the overall Endowment goal of \$200,000 for the preserve.



Project Contacts

Land Preservation	Krista Helmboldt ..	(603) 224-5853
Urban Ponds	Art Grindle	(603) 624-6450
Children's Health	Rosemary Caron ..	(603) 624-6466 x317
Education	Beth Brazil	(978) 681-5777
Department of Environmental Services	Eric Williams	(603) 271-2358
Environmental Protection Agency	Trish Garrigan	(617) 918-1583